POPPLEPSALTA AEROIDES OWEN & MOULDS (HEMIPTERA: CICADIDAE): DESCRIPTION OF THE FEMALE

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Abstract

The female of the cicada species *Popplepsalta aeroides* Owen & Moulds is described. Features which differentiate *P. aeroides* from *P. rubristrigata* (Goding & Froggatt) are included.

Introduction

In their recent review of the Australian cicada genus *Pauropsalta* Goding & Froggatt, Owen and Moulds (2016) erected the genus *Popplepsalta* Owen & Moulds to accommodate 16 species, one of which was new. The new species, *Popplepsalta aeroides* Owen & Moulds, 2016, was described from eight males collected from southern Queensland, the Sydney region and south coastal New South Wales (Owen and Moulds 2016). The female remained unknown. Here we provide the first description of the female of *Popplepsalta aeroides* from four specimens: three from Royal National Park, south of Sydney and one from Upper Dalrymple Creek in SE Queensland.

Abbreviations. DE – private collection of Prof. D. Emery, Sydney; LP – private collection of Dr L. Popple, Brisbane; QM – Queensland Museum, Brisbane.

Popplepsalta aeroides Owen & Moulds

(Figs 1-3)

Material examined. NEW SOUTH WALES: $1 \ \varphi$, Garie Beach, Royal National Park, 34°10'08"S 151°03'56"E, 13.i.2012, S., N. & D. Emery (LP); $1 \ \varphi$, same location, 29.i.2012, N. & D. Emery; $1 \ \varphi$, same location, 24.xii.2016, N. & D. Emery (DE). QUEENSLAND: $1 \ \varphi$, Upper Dalrymple Ck via Goomburra, 21-22.xi.1987, G.B. Monteith (QM).

Description of female. Head about as wide as lateral angles of pronotal collar, predominantly black, with golden pubescence. Vertex with spot at posterior midline. Postclypeus black with orange-brown markings, a reddish brown spot on midline around ventral anterior segment, lateral and posterior margins orange-brown; transverse ridges black, central groove distinct. Lorum black, gena black. Anteclypeus black along midline, brown laterally. Rostrum ochraceous, becoming darker posteriorly, reaching the posterior margin of the mid coxae. Antennae black, brown at base. Supra-antennal plates brown with reddish anterior margin.

Thorax. Pronotum black, with ochraceous and reddish brown markings, anterior margin orange-brown, fascia along midline orange-brown centrally,

ochraceous laterally, expanded laterally at pronotal collar; pronotal collar reddish brown along posterior margin, broadening at lateral margin. Mesonotum primarily ochraceous brown, lateral and submedian sigellae black, scutal depressions black; cruciform elevation reddish brown, a black fascia along anterior midline. Metanotum black at hindwing base, edged orange-brown or ochraceous along dorsal ridge. Legs mainly ochraceous brown, with reddish longitudinal stripes on femora; femoral spines brown with black tips; fore and mid tibiae reddish brown, hind tibiae pale brown; tarsi reddish brown, claws brown at base, black at tips. Meracanthus triangular, black basally, cream to ochraceous over posterior half.

Wings hyaline. Forewing costa orange-red; veins M and CuA fused before meeting basal cell, venation red to brownish red tending black distally; basal membrane pale grey to blackish. Hind wing with 6 apical cells, venation red to brownish red becoming black distally, basal cell translucent, basal membrane grey; plaga muddy white to pale brown, limited to edges of vein 3A; black infuscation on wing margin at distal end of vein 2A.

Abdomen. Tergites predominantly black; tergites 1 and 2 entirely black; tergites 3-7 with lateral margins increasingly reddish brown, posterior intersegmental membranes blue to varying degrees, fading to yellow-brown on dried specimens; tergite 8 black anteriorly, brownish red centrally, posterior margin greenish blue. Sternite I ochraceous; sternites II-VII ochraceous, lateral sides and posterior margin reddish brown and greenish blue to varying degrees, with black spot on posterior midline of each sternite; abdominal segment 9 black along anterior margin, black dorsally with brown stripe along midline, reddish-brown laterally, blue over ventral surface; dorsal beak black, anal styles red-brown with black posterior margins; ovipositor sheath black; ovipositor brown, sheath and ovipositor extending >3 mm beyond abdominal segment 9.

Measurements. Range and mean (in mm) for $3 \oplus \oplus$; includes smallest and largest of available specimens. Length of body: 21.1-23.1 (22.1). Length of forewing: 22.6-25.5 (23.8). Width of forewing: 7.6-8.0 (7.8). Width of head (including eyes): 5.7-6.5 (6.1). Width of pronotum (across lateral angles): 5.3-6.6 (5.8). Abdominal width (across segment II): 4.8-5.8 (5.0). Ovipositor length: 9.4-10.9 (9.9).

Distinguishing features. In the original description of this species, Owen and Moulds (2016) noted the similarity between males of *Popplepsalta aeroides* and *P. rubristrigata* (Goding & Froggatt, 1904). The principal distinguishing feature was the blue coloration of the intersegmental membranes on abdominal segments 3-7. This also applies to the female but, with drying, the blue coloration fades and reduces the reliability of this character. Therefore, *P. aeroides* can also be distinguished from *P. rubristrigata* by the following combination of characters: body length <24.0 mm; ovipositor length <10.0 mm; and forewing width <10.0 mm.



Figs 1-3. *Popplepsalta aeroides* (Garie Beach, NSW): (1) dorsal habitus of female; (2) ventral habitus of female; (3) live specimens of the male (left) and female (right). Scale bars = 10 mm.

Behaviour. Like *P. rubristrigata*, females of *P. aeroides* are found within 2-3 m of the ground, while males call from >5 m in taller eucalypts. Oviposition by females of both species occurs in green branches of young eucalypts within 5 m of the ground.

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Reference

OWEN, C.L. and MOULDS, M.S. 2016. Systematics and phylogeny of the Australian cicada genus *Pauropsalta* Goding and Froggatt, 1904 and allied genera (Hemiptera: Cicadidae: Cicadettini). *Records of the Australian Museum* **68**(4): 117-200. *http://dx.doi.org/10.3853/j.2201-4349.68.2016.1598*